

WA-Trans Steering Committee Meeting Notes

April 24, 2006

Attendees:

Member	Association	Representing
Tareq Al-Zeer	WSDOT	WSDOT
Chuck Buzzard	Pierce County GIS	West side local government
David Cullom	WA. Utilities & Transportation Commission	Rail And Utility Needs
Tami Griffin	WSDOT Geographic Services	WA-Trans (Project Manager), Facilitator
Jason Guthrie	Lincoln County	County & City Governments
Wendy Hawley	Census Bureau	US Bureau of Census
Michael Leierer	WSDOT Geographic Services	WA-Trans (Assistant Project Manager/ Technical Lead)
Dave Rideout	Spokane County Engineers Office	East side local government
Lurleen Smith	Mason County Public Works	West side local government
Ken Stallcup	WSDOT Contractor	WA-Trans Technical Writer
Ian Von Essen	Spokane County GIS	E-911
Pat Whittaker	WSDOT Transportation Data Office	WSDOT Transportation Data Office
Tim Young	Washington Department of Fish and Wildlife	Natural Resource Organizations

Not Attending:

Member	Association	Representing
Sam Bardelson	US Geological Survey Washington Liaison	The National Map
Michelle Blake	WSDOT GIS Data Administrator	WSDOT
Roland Behee	Community Transit	Transit Organizations
Jerry Harless	Puget Sound Regional Council	MPO's, RTPO's
Elizabeth Stratton	WSDOT	Freight Interests
David Koch	WA Department of Information Service	Information Services Board – Project Oversight
Cathy Udenburg	Walla Walla County	County & City Governments

- Introductions, Status Questions, Time Tracking, Action Item Review
- Washington State Enterprise Architecture and WA-Trans
- Data Providers Interface Business Requirements
- Return on Investment Details and Process
- Outlined Proposal for a Jurisdiction with no Data Pilot
- Draft Process for Inventory of Gaps in Data
- Action Item Review

Introductions, Status Questions, Time Tracking, Action Item Review

Tami introduced Lurleen Smith to the committee. Lurleen is the GIS Manager for Mason County Public Works and we are happy to have Mason County involved again!

Precision Action Item – Tim checked with ESRI regarding the concern that we may have precision

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issues with the Geodatabase. Apparently this is not tied to the Operating System so 64 bit should work. Tim looked a range of coordinate systems for SDE. Precision for longitude improves as you move toward the North Pole. There is no way in SDE to define different levels of for latitude and longitude. There is a difference in the precision of y and x in WA. Tim will distribute the spatial domain calculator. What kind of precision do we need? Dave R. Spokane County settled on up to 3 decimal points. He thinks 1/10 is okay for statewide. Lincoln is okay with 1/10. Chuck commented that people need to know that it isn't in the precision in WA-Trans that the provider stores it in. We need disclaimer for this (metadata). We can't store survey quality data in WA-Trans and that was never part of the plan. Jason worries about size of database with extreme precision.

Decision – 1/10th precision is acceptable for WA-Trans as a statewide dataset.

Action Item - Tim will identify location of spatial domain calculator.

Washington Enterprise Architecture and WA-Trans

Tim presented on the enterprise architecture and the relationship to WA-Trans. WA-Trans could pioneer in the *Business Architecture Processes* including: the designation of WA-Trans as a Framework dataset, stewardship processes, change management, sensitive and secure data management, tier 1 dataset coincident geometry registration, updates and enhancements, data sharing agreements, enterprise funding process. In the *Technology Architecture*: data communications, data exchange formats, access and distribution, and GIS software. Sam Bardelson is taking the lead to “reconstitute” the Framework Management Group.

The WA-Trans boundary issue was brought up. Where does that fit in the list of framework efforts? Tim thinks it would be Governmental Units. Chuck explained the problems we are having with the Puget Sound Pilots and boundaries. Spokane County has the same issue with Spokane and little Spokane River. If we make aerial photos the basis of this as they change we may have difficulties. Tim pointed out that it will get more complicated as we work with Forest Service lands.

Action Item - Lurleen mentioned that she has a meeting with Gavin Schrock and she was a surveyor so she will ask him about the relationship between county surveyors and the state surveyors.

See WA-Trans website for the presentation Tim gave accompanying the meeting notes.

Data Provider Interface Business Requirements

Michael provided background of business level requirements for the data provider screen.

1.1 – The suggestion was that the portal be WC3 compliant. We need a list of browsers for testing purposes.

1.8 – This is more of a constraint then a requirement.

2.0 - Metadata is needed for every category. Need to turn this into a metadata form. There were additional requirements provided to Michael.

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3.0 - There will no longer be support for Access JET engine, but will support SQL express.

3.3 – Specify that unless WA-Trans or local schema changes.

3.4 – Remove the reference to (mdb) after geodatabase.

4.3 – Remove the example. Use a different one.

4.4 - Chuck expectation is that the requirements be communicated through the user interface. As of April of 2008 Census should be done so we have a source data set at the point for everything. Tami mentioned extending PS Pilot into Snohomish and Kitsap because Snohomish doesn't have their own data.

4.5 - Census defined urban area boundaries and then FHWA modifies it. We may want to use FHWA urban boundary. They are defined within a few years of Census. Benefit of this boundary is that it is based on functional class and relationship with roads and funding.

We need quantitative method to evaluate data. We may need to look at specs Census used to determine which data they use and which they didn't. Census has to respect sovereignty as long as the data meets the minimal specs.

Chuck commented that a missing requirement of the interface is that there is a report required for feedback to a provider.

5.1 Change the double precision to single precision. This depends on the geodatabase.

Action Item – Michael will update the document and it will be redistributed for feedback.

See Appendix A for the requirements Michael originally provided.

Return on Investment Details and Process

Tami reported on the Return on Investment Study she is working on with the assistance of GITA and partially funded by GITA. She provided the draft report. When the updated report is ready she will provide it. It is turning out to be fairly easy to determine business value and put it into the GITA spreadsheets. We only have 1.3 million to find out of over 7 million to develop and maintain WA-Trans over a 20 year time period. There was some question after the meeting about the realism of the 7 million dollar figure but Tami can show anyone who wants to see how she arrives at the figure.

Next steps include finishing up at WSDOT and then working with the steering committee to expand the study to non-WSDOT partners. It is possible that FGDC will fund another trip by GITA and that could assist with this process.

See Appendix B for the draft document. This is an edited document so ignore the changes.

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Outlined Proposal for a Jurisdiction with no Data Pilot

Ian explained the opportunity with a CAP Grant that Pend Orielle County got. They started with a lot of datasets, not maintained and not integrated with their business sets. They, along with a tribe and local utility got a CAP grant so they have about \$100K for this creating the start of a GIS program in their county.

Cathy was unable to attend the meeting but contacted Tami after the meeting and reported there is a GIS file in the works or completed for each and every county on our list, Asotin, Whitman and Garfield. Garfield is working on the addressing attributes but anticipates being done within the year. Almost all contacts were through the 911 center.

Action Item – Cathy will send Tami a summary of the attributes and location accuracy and contacts within the next week.

Action Item – Ian provide Tami and the group with information about costs, lessons learned, and suggestions from his experiences working with Pend Orielle County.

Draft Process for Inventory of Gaps in Data

Since Cathy didn't attend the meeting this was tabled for a future meeting.

Next meeting and Action Item Review

July 24th 2006

9:00 – 12:00

Spokane

Video-conferencing will be available from Olympia and Seattle.

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Appendix A - Data Provider Business Requirements

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Appendix A

This is a preliminary list of business requirements for a Data Provider interface. This list has been gleaned from the Steering Committee notes and turned into an initial set of data provider interface business requirements.

1.0 Data Submission

- 1.1 A data provider will be able to submit data to WA-Trans through an Internet Portal.*
- 1.2 The data provider internet interface must work for any of the standard browsers and browser configurations.*
- 1.3 Provide links back to individual data providers.*
- 1.4 ADA issues need to be considered in the Internet interface visual and functional design.*
- 1.5 A data provider will be able to Re-project data in disparate coordinate systems into a common spatial framework.*
- 1.6 All new data providers will need guidance in some form (e.g. a wizard) when submitting data for the first time.*
- 1.7 A data provider will need to fill out a submission form that allows the ability to enter/update provider information.*
- 1.8 We may not be able to replace manual processes with automated ones as much for the first submission.*

2.0 Metadata

- 2.1 A data provider will need to fill out a metadata form that allows the data provider to enter/update metadata.*
- 2.2 A metadata form must feed immediately to a QA/QC tool to validate necessary input.*
- 2.3 There will be provider information and data sets in framework imbedded in the metadata, which will ensure the provider is clearly identified and the data is clearly identified.*

3.0 Data Schema and Translator

- 3.1 Data providers have a significant investment in their GIS data models and schemas. They will not be required to abandon these schemas or to incorporate the WA-TRANS data model into their systems.*

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3.2 Data Providers will be able to provide data in a local format/schema as input, which is processed through translation and QA/QC processes and output to the WA-TRANS format/schema and data model.

3.3 Established data translators will need to be maintained for repeat data providers/users (e.g. a Pierce County data translator).

*3.4 Data Providers will be able to input their data from a variety of GIS data models that only include: *.shp, *.dgn, *.dxf, *.dwg, geodatabase (mdb), XML, *.xls. This input must be defined by the data provider.*

3.5 The understanding was the translator would do the translation and then handle processing post translation so less customization is required in the front end. Maybe some very minor checks at the front end to make sure the data will translate. The group feels there needs to be very limited up front preprocessing.

4.0 Data Validation

4.1 The data translator must feed immediately to a QC/QA tool to validate data input for WA-TRANS and identify data problems.

4.2 Any validation issues will need to be communicated to the data provider and processes to remedy the problems provided by the data provider user interface. This will need to be done before any data is accepted by WA-Trans for a data provider.

4.3 We need to define which attributes are required and which attributes we are going to accept a percentage of completeness. An example provided of the issue is Lincoln County in which the data has good spatial accuracy but no addresses.

4.4 There is concern that we not have to stringent requirements for submission. It is felt that we want the data even if we have to initially do a lot of post-processing, especially if it is the only data for that jurisdiction or mode.

4.5 Data validation specific to the mode of data being provided will include:

- *Metadata*
- *Ramps – need to identify WSDOT naming convention.*
- *Bridges and culverts – eventually we would like them to be segmented the bridge at the beginning and end, but right now they can be events.*
- *Aviation – airport location, runway segments, connector road*
- *Boundaries – disclaimer on boundaries as they change regularly and we may not always have the latest. Boundaries will include county and reservations. City is questionable due to the rate of change but for now include them. The jurisdiction code*

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Appendix A

will have to change every time we get a new boundary. That is a big maintenance issue.

4.6 The data provider will need to satisfy the designation as the preferred provider for the data they are submitting. The first cut of who is responsible is the jurisdiction. If another agency has better data and the "data stewards group" agrees it is better data then we need to consider using it. Most agencies know who has better data.

5.0 Data Accuracy

5.1 Node, point and line features will have at least double precision coordinates.

5.2 The following values are the target standards for accuracy:

	Urban			Rural			Remote (ag/forestry)		
	High	Med	Low	High	Med	Low	High	Med	Low
Spatial Accuracy	1 ft.	5 ft.	40 ft.	5 ft.	40 ft.	50 ft.	40 ft.	50 ft.	100 ft.
Update Frequency	1 mos.	6 mos.	1 yr.	1 yr.	2 yrs.	3 yrs.	1 yr.	2 yrs.	5 yrs.
Attribute Completeness	95%	80%	70%	95%	80%	70%	N/A	N/A	N/A
Source Scale	1:1200	1:6000	1:24 K	1:6000	1:24 K	1:48 K	1:24K	1:48K	1:100K

5.3 Vertical Datum is NGVD 88, although WA-Trans is not currently retaining vertical data.

6.0 Nice to have and other stuff

6.1 The translator needs to identify the local counterparts for the essential WA-TRANS data elements in order to reformat them into the WA-TRANS model.

6.2 A wizard interface would allow the local data steward to approve/change the proposed translations and identify those not found by the automated data audit.

6.3 An ideal software tool would be able to audit a sample of input data, say a ROADS coverage, read its metadata, and propose a translation (e.g. local "Roadname" field to WA-Trans "Street Name").

Appendix B – ROI Study Draft Article (with edits)

State Transportation Framework for GIS (State-Trans)

Working Draft – April 15, 2006

(This business case is still under development.)

Executive Summary

The State DOT is planning to develop a statewide transportation network for use by the entire department as well as all public utilities and government agencies in the state. This project will improve public safety, intergovernmental coordination, and economic development. The DOT has started to identify and quantify specific benefits. At this stage, the financial analysis shows a negative return on investment (loss) of roughly 1% per year over a 20-year project life. However, staff believes that further study will reveal additional benefits that will result in a positive return on investment. The likelihood of sound financial performance coupled with significant strategic benefits has prompted staff to recommend that the DOT continue research and development of the business case while funding a pilot data compilation effort.

Comment [g1]: WA-Trans is multi-modal, including roads, railroads, light rail, non-motorized, aviation, ferries and ports.

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Project Description

The State DOT's mission is to keep people and business moving by operating and improving the state's transportation systems vital to taxpayers and communities. State-Trans will support this mission by providing a seamless, statewide transportation location-based data set that includes the best information available about roads, railroads, airports, ferry terminals and routes, port facilities, and non-motorized transportation routes such as bike paths and horse trails. The DOT strives to continuously improve transportation planning. Better planning will ultimately lead to better transportation infrastructure and more effective utilization of existing resources.

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The State-Trans project will provide a robust data set that will be used to improve transportation planning, analysis and design capabilities not only for the State DOT but also for local and regional organizations across the state. Benefitted organizations include: a regional council of governments, four county governments, a conference of governments, a U.S. Bureau of Census Regional Office, a State Department of Fish and Wildlife, and a utilities and transportation commission.

Excluded from this analysis due to resource limitations, but of equal or greater value are the benefits to emergency management related applications.

In order to integrate data from local, state, federal and tribal government sources, the scope of the State-Trans project includes:

- Complete the development of the statewide spatial database and related data standards
- Implement supporting applications that provide access to the spatial database and support integration of disparate data sets
- Develop interagency agreements in support of data sharing to formalize collaborative data collection and maintenance

Project Cost and Schedule

The present value of the remaining project investment is estimated to be roughly \$7 million. The investment analysis considers a 20-year project life. At present, the original data compilation efforts are estimated to take 5 years.

Work is currently underway to refine the estimates of costs and the project schedule. The ultimate schedule of activities will depend on the availability of funding for the data compilation effort.

Financial Analysis

Work is currently underway to identify and quantify all the benefits of the State-Trans project. To date, the following productivity benefits (labor savings) have been identified, quantified, and added to the financial analysis:

Job Category	Benefit Description	Quantified Value
Transportation Planning Specialist 4	Reduce amount of time spent providing data to local partners.	16 hours per month for 6 regions = 1152 hours saved per year
Transportation Planning Specialist 4	Reduce amount of time spent gathering data to scope a project.	70 projects per year @ 3 hours per project times 6 regions = 1260 hours per year
Transportation Planning Specialist 4	Reduce the time needed to update statewide road maps by providing data directly from State-Trans.	209 hours per year for a variety of maps produced
Transportation Planning Specialist 3	Eliminate research/data acquisition time for Highway Usage Branch of Transportation Data Office to acquire usage data on non-state routes.	80 hours per year
Transportation Planning Specialist 3	Increase efficiency of updating segment records in Travel Analysis and Functional Class database.	416 hours per year
Transportation Planning Specialist 2	Increase efficiency of updating segment records in Travel Analysis and Functional Class database.	416 hours per year
Transportation Planning Technician 3	Eliminate research and data acquisition time for Highway Usage Branch of Transportation Data Office to acquire usage data on non-state routes.	80 hours per year
Transportation Planning Technician 2	Eliminate need for Collision Data and Analysis Branch of TDO to review each accident report to determine jurisdiction.	5,240 hours per year (roughly 3 full time equivalent positions)
Transportation Engineer 4	Increase efficiency of updating segment records in Travel Analysis and Functional Class database.	416 hours per year
WMS Band 1	Increase efficiency of Freight and Goods Transportation System Report Update Process.	10 hours per year

Job Category	Benefit Description	Quantified Value
Transportation Planning Specialist 5	Gather City Data for use in the Freight and Goods Transportation System Report.	16 hours per year

In addition, the DOT anticipates that State-Trans will minimize the need for contracts to acquire data for transportation projects. This is a cost avoidance of between \$15,000 and \$20,000 per project, and there are generally two projects per year.

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The DOT has prepared a preliminary financial analysis to compare these initial benefit estimates with the current cost and schedule projections. This draft analysis shows a \$1.3 million loss (net present value), reflecting an average annual loss of roughly 1% (negative return on investment). The table below summarizes this preliminary analysis.

	2006	2007	2008	2009	2010
Future Cash Flows					
Internal Labor Costs	(\$212,516)	(\$188,680)	(\$213,077)	(\$138,696)	(\$254,511)
Contract/Procurement Costs	(\$158,479)	(\$230,212)	(\$1,061,649)	(\$1,190,236)	(\$824,989)
Productivity Benefits	\$0	\$0	\$22,537	\$45,749	\$52,364
Other Benefits	\$35,000	\$35,875	\$36,772	\$37,691	\$38,633
<i>Present Value Multiplier:</i>	100.0%	97.6%	95.3%	93.0%	90.8%

Current Values					
Internal Labor Costs	(\$212,516)	(\$184,187)	(\$203,051)	(\$129,024)	(\$231,124)
Contract/Procurement Costs	(\$158,479)	(\$224,730)	(\$1,011,696)	(\$1,107,227)	(\$749,180)
<i>Total Annual Costs</i>	<i>(\$370,995)</i>	<i>(\$408,918)</i>	<i>(\$1,214,747)</i>	<i>(\$1,236,251)</i>	<i>(\$980,304)</i>
<i>Cumulative Costs</i>	<i>(\$370,995)</i>	<i>(\$779,912)</i>	<i>(\$1,994,659)</i>	<i>(\$3,230,910)</i>	<i>(\$4,211,214)</i>

Productivity Benefits	\$0	\$0	\$21,476	\$42,559	\$47,552
Other Benefits	\$35,000	\$35,021	\$35,042	\$35,063	\$35,083
<i>Total Annual Benefits</i>	<i>\$35,000</i>	<i>\$35,021</i>	<i>\$56,518</i>	<i>\$77,621</i>	<i>\$82,636</i>
<i>Cumulative Benefits</i>	<i>\$35,000</i>	<i>\$70,021</i>	<i>\$126,539</i>	<i>\$204,160</i>	<i>\$286,796</i>

Cumulative Net Benefits	(\$335,995)	(\$709,892)	(\$1,868,121)	(\$3,026,750)	(\$3,924,419)
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	2011	2012	2013	2014	2015
Future Cash Flows					
Internal Labor Costs	(\$205,980)	(\$209,069)	(\$212,206)	(\$176,317)	(\$178,962)
Contract/Procurement Costs	(\$49,854)	(\$50,038)	(\$50,226)	(\$50,420)	(\$50,618)
Productivity Benefits	\$387,527	\$393,339	\$399,240	\$405,228	\$411,307
Other Benefits	\$39,599	\$40,589	\$41,604	\$42,644	\$43,710
<i>Present Value Multiplier:</i>	88.6%	86.5%	84.5%	82.5%	80.5%

Current Values					
Internal Labor Costs	(\$182,599)	(\$180,925)	(\$179,266)	(\$145,402)	(\$144,070)
Contract/Procurement Costs	(\$44,195)	(\$43,302)	(\$42,430)	(\$41,579)	(\$40,749)
<i>Total Annual Costs</i>	<i>(\$226,794)</i>	<i>(\$224,227)</i>	<i>(\$221,696)</i>	<i>(\$186,982)</i>	<i>(\$184,818)</i>
<i>Cumulative Costs</i>	<i>(\$4,438,008)</i>	<i>(\$4,662,235)</i>	<i>(\$4,883,931)</i>	<i>(\$5,070,913)</i>	<i>(\$5,255,731)</i>

Productivity Benefits	\$343,538	\$340,389	\$337,268	\$334,177	\$331,113
Other Benefits	\$35,104	\$35,125	\$35,146	\$35,167	\$35,188
<i>Total Annual Benefits</i>	<i>\$378,642</i>	<i>\$375,514</i>	<i>\$372,414</i>	<i>\$369,344</i>	<i>\$366,301</i>
<i>Cumulative Benefits</i>	<i>\$665,437</i>	<i>\$1,040,951</i>	<i>\$1,413,366</i>	<i>\$1,782,709</i>	<i>\$2,149,011</i>

Cumulative Net Benefits	(\$3,772,571)	(\$3,621,284)	(\$3,470,566)	(\$3,288,204)	(\$3,106,720)
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	2016	2017	2018	2019	2020
Future Cash Flows					
Internal Labor Costs	(\$181,647)	(\$184,371)	(\$187,137)	(\$189,944)	(\$192,793)
Contract/Procurement Costs	(\$50,821)	(\$51,029)	(\$51,242)	(\$51,460)	(\$51,684)
Productivity Benefits	\$417,476	\$423,738	\$430,094	\$436,546	\$443,094
Other Benefits	\$44,803	\$45,923	\$47,071	\$48,248	\$49,454
<i>Present Value Multiplier:</i>	78.6%	76.7%	74.9%	73.1%	71.4%

Current Values					
Internal Labor Costs	(\$142,749)	(\$141,440)	(\$140,144)	(\$138,859)	(\$137,586)
Contract/Procurement Costs	(\$39,938)	(\$39,147)	(\$38,374)	(\$37,620)	(\$36,884)
<i>Total Annual Costs</i>	<i>(\$182,687)</i>	<i>(\$180,587)</i>	<i>(\$178,518)</i>	<i>(\$176,479)</i>	<i>(\$174,471)</i>
<i>Cumulative Costs</i>	<i>(\$5,438,418)</i>	<i>(\$5,619,005)</i>	<i>(\$5,797,523)</i>	<i>(\$5,974,002)</i>	<i>(\$6,148,473)</i>

Productivity Benefits	\$328,078	\$325,071	\$322,091	\$319,138	\$316,213
Other Benefits	\$35,209	\$35,230	\$35,251	\$35,272	\$35,293
<i>Total Annual Benefits</i>	<i>\$363,287</i>	<i>\$360,301</i>	<i>\$357,342</i>	<i>\$354,410</i>	<i>\$351,506</i>
<i>Cumulative Benefits</i>	<i>\$2,512,298</i>	<i>\$2,872,598</i>	<i>\$3,229,940</i>	<i>\$3,584,350</i>	<i>\$3,935,856</i>

Cumulative Net Benefits	(\$2,926,120)	(\$2,746,406)	(\$2,567,583)	(\$2,389,652)	(\$2,212,617)
	2021	2022	2023	2024	2025

Future Cash Flows					
Internal Labor Costs	(\$195,685)	(\$198,620)	(\$201,599)	(\$204,623)	(\$207,693)
Contract/Procurement Costs	(\$51,914)	(\$52,149)	(\$52,391)	(\$52,638)	(\$52,891)
Productivity Benefits	\$449,740	\$456,486	\$463,334	\$470,284	\$477,338
Other Benefits	\$50,690	\$51,958	\$53,257	\$54,588	\$55,953
<i>Present Value Multiplier:</i>	69.7%	68.0%	66.4%	64.8%	63.3%

Current Values					
Internal Labor Costs	(\$136,325)	(\$135,075)	(\$133,837)	(\$132,610)	(\$131,395)
Contract/Procurement Costs	(\$36,166)	(\$35,465)	(\$34,781)	(\$34,113)	(\$33,461)
<i>Total Annual Costs</i>	<i>(\$172,491)</i>	<i>(\$170,541)</i>	<i>(\$168,618)</i>	<i>(\$166,723)</i>	<i>(\$164,856)</i>
<i>Cumulative Costs</i>	<i>(\$6,320,964)</i>	<i>(\$6,491,505)</i>	<i>(\$6,660,123)</i>	<i>(\$6,826,846)</i>	<i>(\$6,991,702)</i>

Productivity Benefits	\$313,314	\$310,442	\$307,597	\$304,777	\$301,983
Other Benefits	\$35,314	\$35,335	\$35,356	\$35,377	\$35,398
<i>Total Annual Benefits</i>	<i>\$348,628</i>	<i>\$345,777</i>	<i>\$342,953</i>	<i>\$340,154</i>	<i>\$337,381</i>
<i>Cumulative Benefits</i>	<i>\$4,284,484</i>	<i>\$4,630,262</i>	<i>\$4,973,214</i>	<i>\$5,313,368</i>	<i>\$5,650,749</i>

Cumulative Net Benefits	(\$2,036,480)	(\$1,861,243)	(\$1,686,909)	(\$1,513,478)	(\$1,340,953)
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Although the project does not break even in the current analysis, the DOT fully expects to identify additional internal benefits that will produce a payback during the project life. **Several additional areas within the DOT have been identified for potential analysis and benefits.** Furthermore, the benefits to external agencies are expected to produce a positive net present value and return on investment from the perspective of the State taxpayer.

Strategic Analysis

State-Trans will improve public safety in several important ways:

- It will provide a common foundation for the development of state-wide disaster management plans related to evacuation, transportation of fuel and other emergency supplies, and critical infrastructure protection. Better plans will improve the State's disaster preparedness and response.
- It will improve the quality of the State's accident information, which will in turn improve the quality of the DOT's decisions about where to invest limited capital improvement dollars. By targeting our road network improvements to the areas that are truly the most critical, the State anticipates it can reduce the frequency and severity of accidents per capita.

- A common (shared) transportation map will improve coordination between local emergency responders. This will facilitate dispatch and reduce extra-jurisdictional response times to incidents that require the cooperative efforts of multiple local governments..
- A common law enforcement land base will enable law enforcement agencies at all levels of government to share data and collaborate more effectively. This will improve the quality of crime pattern analysis and should ultimately reduce crime.

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State-Trans will also improve inter-governmental coordination and planning by providing a common framework for the analysis of current and future land uses, traffic patterns, and development trends.

In addition to supporting state-wide coordination, the State-Trans data set will benefit virtually all of the State's public agencies individually. Many of the same types of tangible benefits anticipated by the DOT will also accrue to other organizations that compile maps and reports or otherwise work with street addresses and spatial data. By providing cities, counties, and other government agencies with a robust, accurate street network, the DOT will enable these outside organizations to develop beneficial GIT applications with minimal investment in data. Since the data investment is typically the most expensive part of a GIT project, the agencies that use the State-Trans data will enjoy significantly higher returns on their GIT investments than would otherwise be possible. From the perspective of State taxpayers who fund not only the DOT but also these external agencies, this presents the opportunity for a significant return on the combined investments of State-Trans and the GIT projects it will support statewide. Further study is needed to identify and quantify the benefits of State-Trans to outside organizations.

Comment [g2]: I agree with this, but am slightly concerned with the phrasing because we have several local governments that have very good GIS transportation data they already maintain and will be providing to us. I don't want to make it sound as if we will be giving them back their own data with a higher value, because, except for the ability to share using a common LRS and regional applications, for these governments WA-Trans value is not equal to their own data. For those with limited or no data we will provide this value without a doubt!

Finally, State-Trans will support economic development by making the state more attractive to the business community. The integrated state-wide road network will facilitate demographic and traffic analysis, site selection, advertising planning, and other activities essential to retailers and many other types of businesses. Also, the improved level of interagency communication will supported by State-Trans will allow local governments to be more responsive to all customers, including the development community and businesses that are considering relocation to the state or expansion of their operations within the state.

Conclusion

The State-Trans project promises to provide significant benefits to the DOT and even greater benefits to State tax payers. However, further analysis is needed to identify and quantify more benefits. Since the project is within 1% per year of breaking even, the staff anticipates that further analysis will reveal that this is a financially sound investment. As a result, staff recommends continued research and analysis to update this preliminary business case.

Furthermore, given the significant strategic benefits of the project and the likelihood that there will be a positive financial return, staff recommends that the DOT proceed with a project pilot, which will help to clarify the costs and benefits of the full investment